

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-012987**Date Inspected:** 09-Apr-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1100**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1930**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site

CWI Name:	Bonifacio Daquinag and Mike Johnson			CWI Present:	Yes	No	
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No	N/A
				Delayed / Cancelled:	Yes	No	N/A
Bridge No:	34-0006			Component:	Orthotropic Box Girder		

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG L2E/L3E plate 'E2' (5600 to 7700mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 and Mitch Sittinger perform CJP groove (splice) welding fill to cover pass. The welder was observed welding in the 3G (vertical) position utilizing an automatic dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the other side of the plate prior welding. During welding, ABF Quality Control (QC) Bonifacio Daquinag was noted monitoring the welding parameters of the welder. QA performed parameter readings during welding with the following results; 260 amperes, 23.2 volts and 250mm per minute travel speed which are deemed acceptable to contract specifications. The ABF welders have completed welding the cover of the splice butt joint in this mentioned area and was noted visually inspected by ABF QC Bonifacio Daquinag. QA also performed initial visual check on the completed weld and appears acceptable to contract requirements. After completing welding the area mentioned above, the welders have moved to same plate but in higher elevation 2900mm to 5600mm. The root was again welded with the same process as mentioned above and visually accepted by the QC. Then it was followed by fill passes until the end of their shift. The welding in this location was not completed and the welders intend to continue tomorrow.

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

QA randomly observed ABF/JV qualified welders Rory Hogan (ID #3186) and Jeremy Dolman (ID #5042) perform CJP groove (splice) back welding fill to cover pass on Orthotropic Box Girder (OBG) L1E/L2E plate 'C1'(0 to 5270mm / outside). The welders were observed welding in the 4G (overhead) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1. The welder was using a track mounted welder holder assembly that is remotely controlled. The joint being welded has the backing bar gouged using the Esab Plasma Arc machine and was ground smooth. The gouged and ground splice butt joint was also Non Destructive Testing (NDT) tested using the Magnetic Particle Testing (MT). The splice joint was preheated to greater than 150 degree Fahrenheit using Miller Proheat 35 Induction Heating System prior welding and the vicinity was properly protected from wind. During welding, ABF Quality Control (QC) Mike Johnson was noted monitoring the welding parameters of the welder. At the afternoon 1st break of the ABF shift, the weld cover of the splice butt joint back weld was completed and the welders have moved to the other half of the splice butt joint. The welder was able to put few fill passes in this location before the shift ended. QA performed parameter check during welding and noted 230 amperes, 24.2 voltages and a travel speed of 200mm per minute which appears in compliance to contract requirements.

In another OBG location, OBG L1E/L2E plate 'C' (outside), QA observed ABF QC personnel Jesus Cayabyab and Jim Cunningham perform Magnetic Particle Testing (MT) on the gouged and ground splice joint backing bar removal. The ABF QC was using a Magnaflux AC/DC electromagnetic yoke and red magnetic powder as detecting media. At the end of the shift, the MT of the splice joint was not completed and ABF QC MT was still continuing.

Other ABF activities noted during the shift were completion of grinding on the gouged backing bar at OBG 2E/3E plate 'C' and grinding/removal of all fitting gear OBG 2E/3E plate 'E' outside. ABF personnel have informed QC about the completion of grinding on the gouged backing bar at OBG 2E/3E plate 'C' and was ready for MT.



WELDING INSPECTION REPORT

(Continued Page 3 of 3)



Summary of Conversations:

As stated above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By: Lizardo, Joselito

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer